

PRIOR ART Fig. 1

09633330.080700

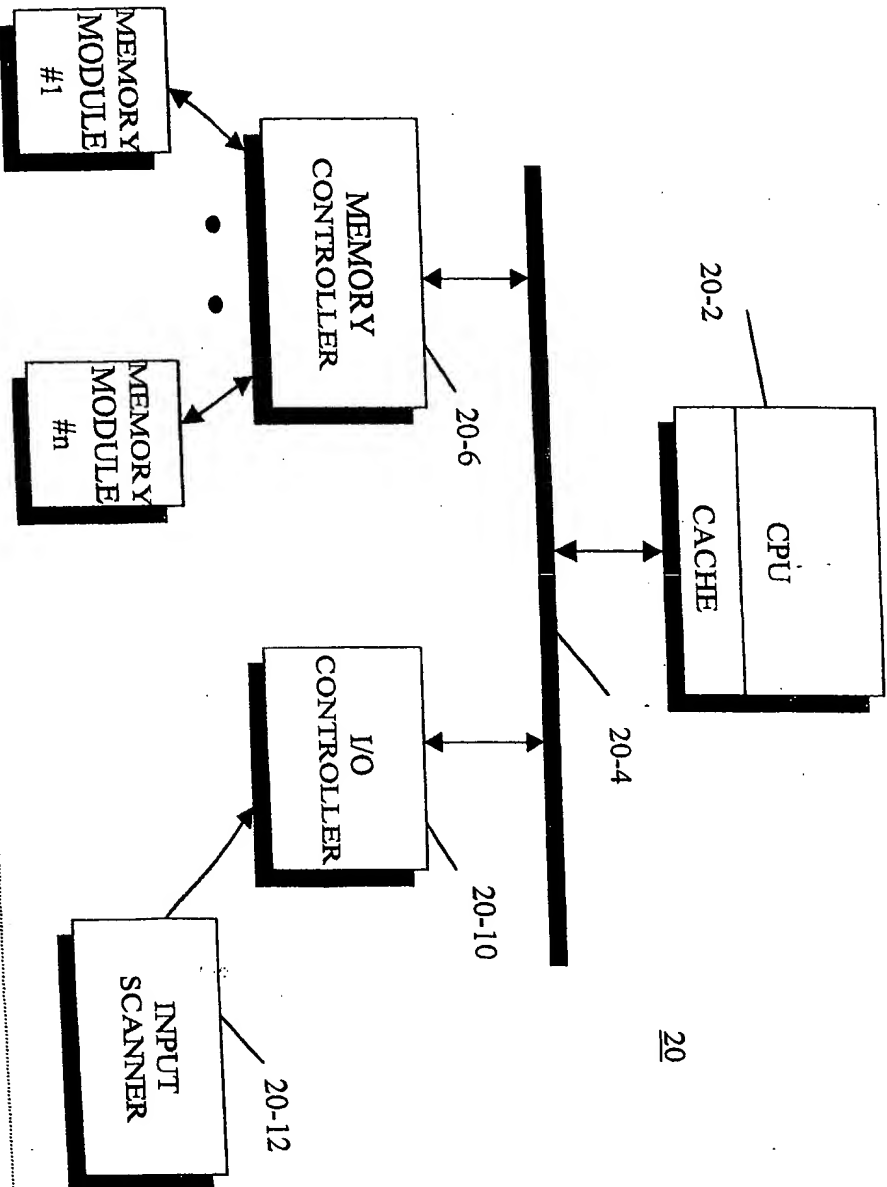
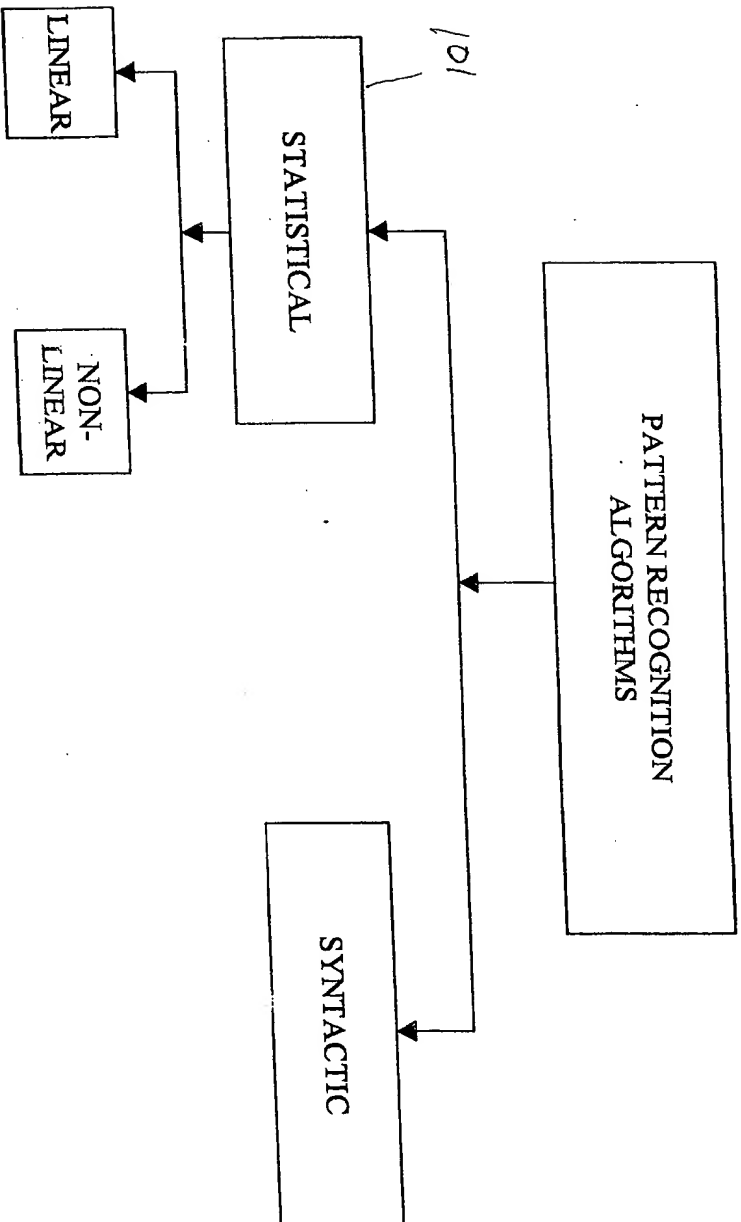


Fig. 2
PRIOR ART

09633300.080700



Prior Art

Fig. 3

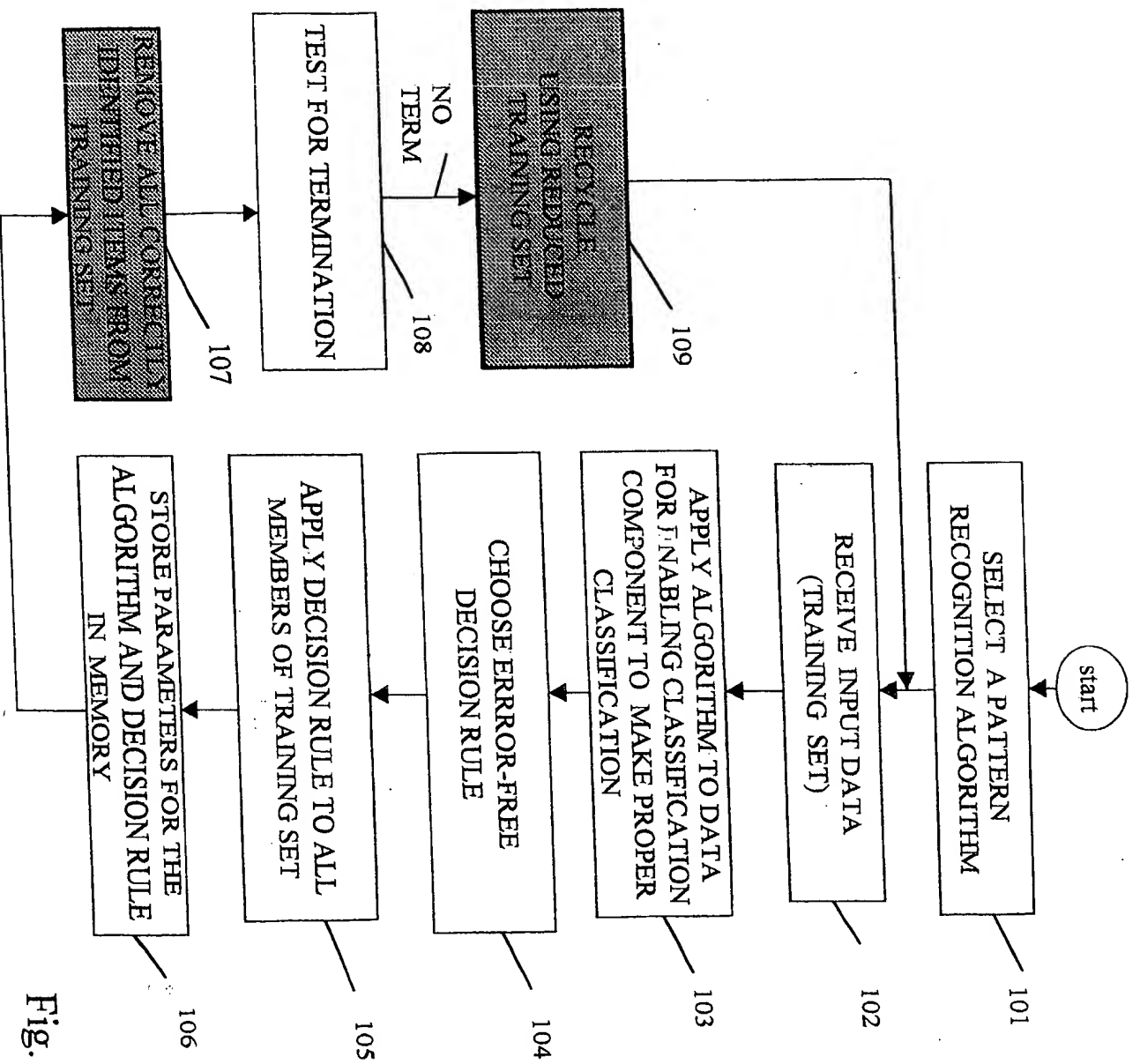


Fig. 4a

09533330.080700

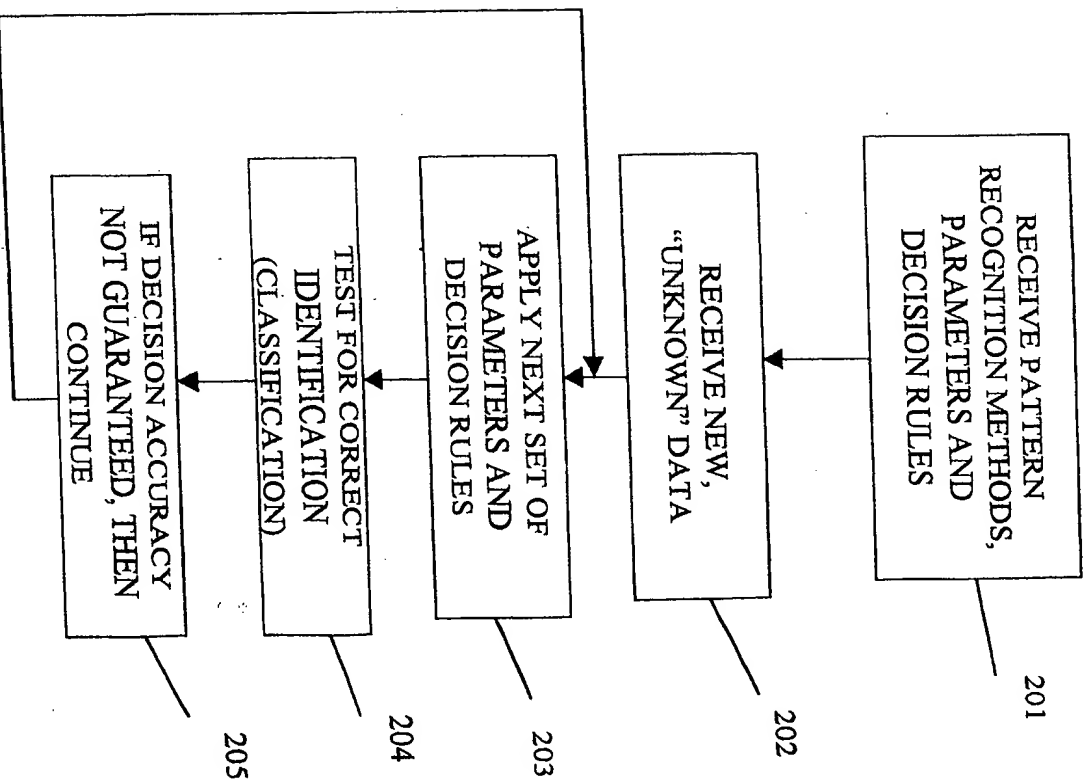


Fig. 4b

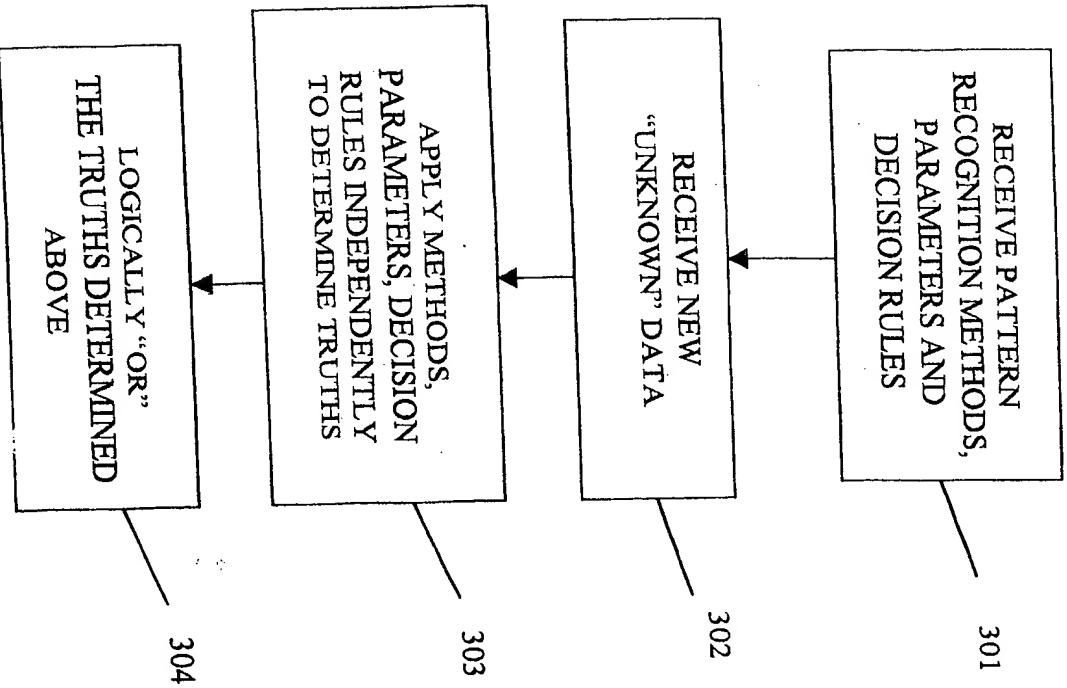
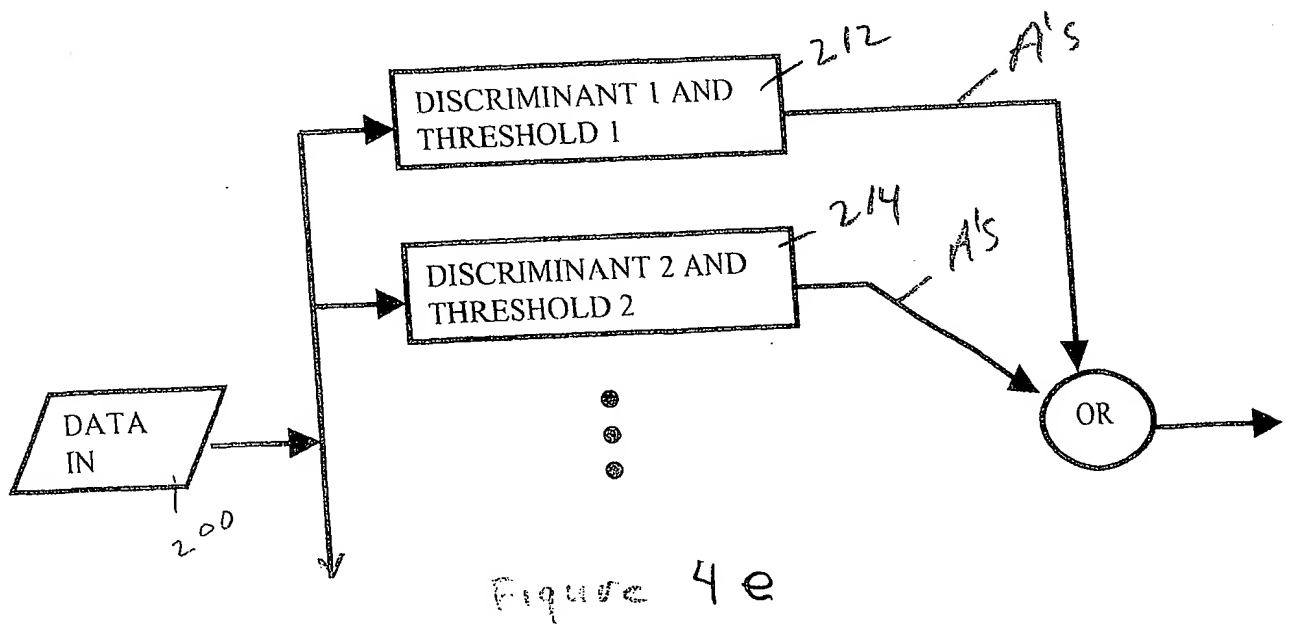
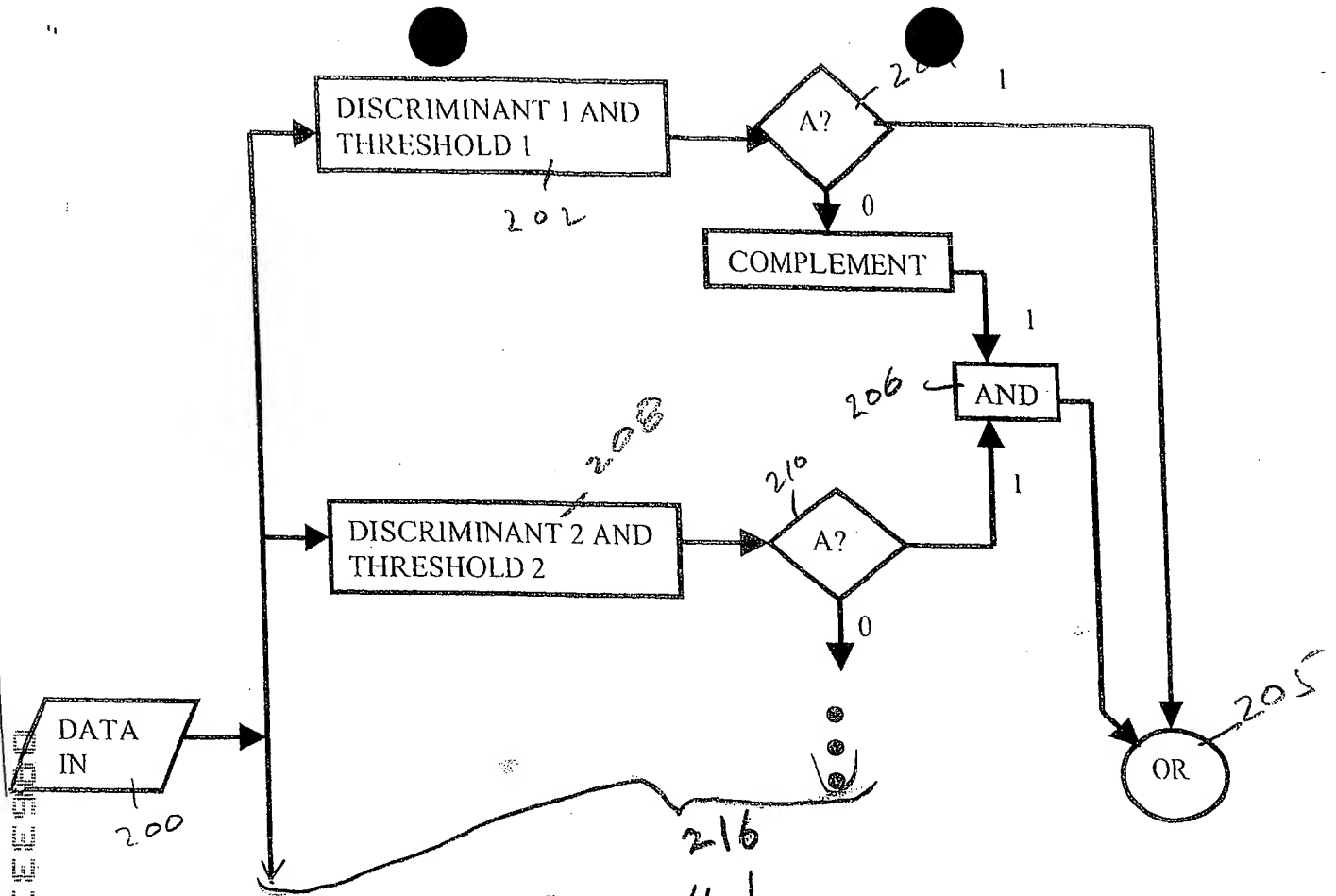


Fig. 4c



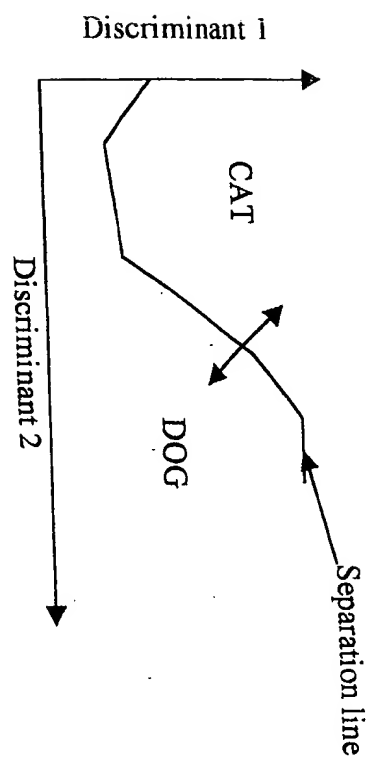


Fig. 5

091533330.080700

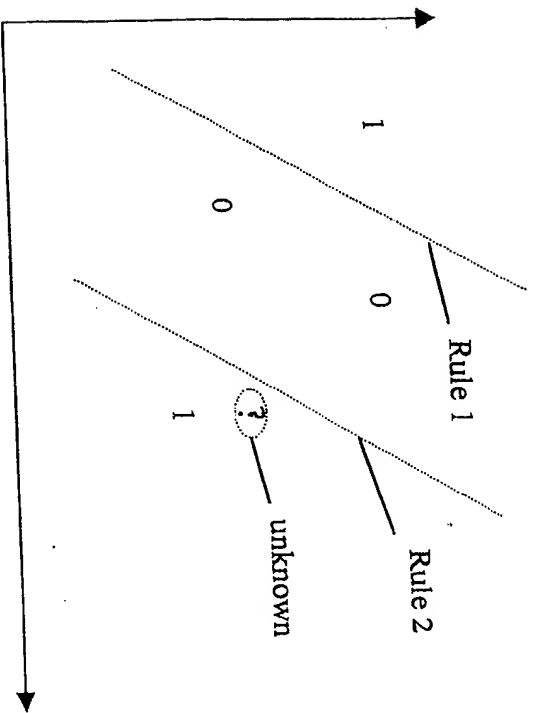


Fig. 6

09633320 080700

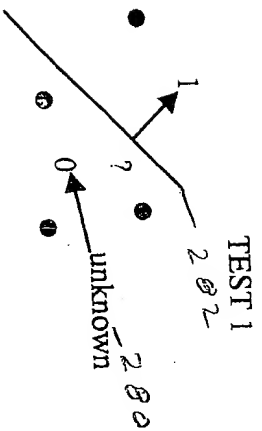


Fig. 7a

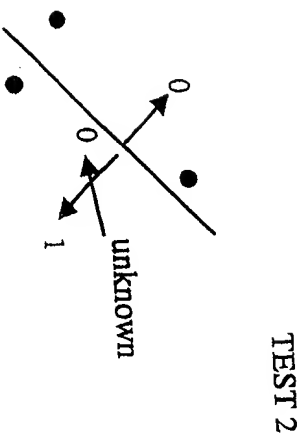
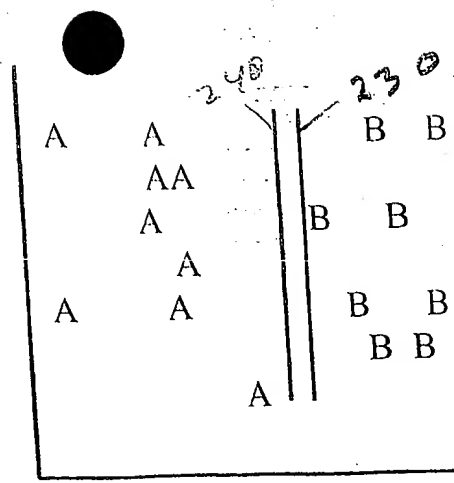
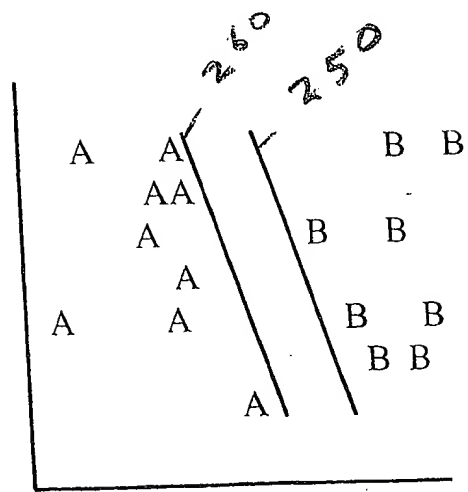


Fig. 7b



(a)

Figure 8a



(b)

Figure 8b

004080-0555960

A A B B
AA
A B B
A
A B B
B B
A

Figure
96

Figure 9a

STARTING TRAINING SET(S)

TRAIN A FOURIER FILTER TO DISCRIMINATE BETWEEN ONE SET AND ALL OF THE OTHERS

SET THRESHOLD SUCH THAT ALL MEMBERS OF THE TRAINING SETS ARE CLASSIFIED WITHOUT ERROR AS EITHER THE TARGET CLASS OR UNKNOWN (SO FAR)

REMOVE FROM THE TRAINING SET ALL MEMBERS PROPERLY CLASSIFIED SO FAR

IF THERE ARE NO MORE MEMBERS OF THE SOUGHT-AFTER CLASS IN THE TRAINING SET, STOP. OTHERWISE, RETURN TO FILTER TRAINING STEP BUT USE SMALLER TRAINING SET (S) JUST PRODUCED.

FIG. 10

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graph LR
    400[COHERENT "LASER" LIGHT SOURCE] --> 402[SPATIAL LIGHT MODULATOR "SLM"]
    402 -- OPTICAL PATTERN --> 406[OPTICAL FOURIER TRANSFORMER (LENS)]
    406 --> 408[MASK OR FILTER]
    408 --> 410[THRESHOLD DECISION]
    410 --> 412[OUTPUT (OPTICAL) DETECTOR ARRAY]
    412 --> 414[OPTICAL FOURIER TRANSFORMER]
    414 --> 416[FEEDBACK LOOP]
    416 --> 402
  
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Figure 11

Figure 11

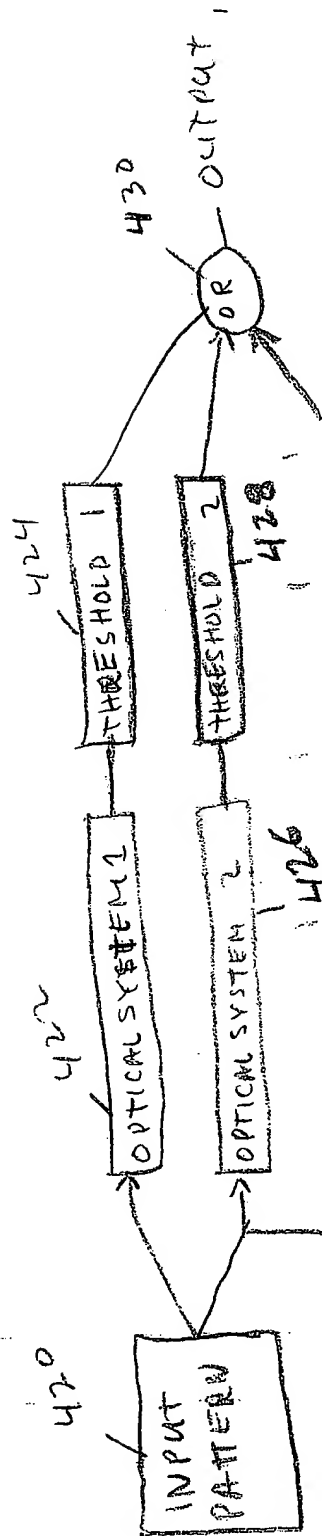


Figure 12